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| 10/789,099 | 02/27/2004 | Joseph L. Hellerstein | YOR920030549US1 (590.127) | 9008 |
| 35195 7590 07/23/2008 FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143 | | | | |
| EXAMINER ZHE, MENG YAO | | | | |
| ART UNIT 2195 | | PAPER NUMBER | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/789,099

Applicant(s)

HELLERSTEIN ET AL.

Examiner

MENGYAO ZHE

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-23 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 12, 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Wolfinger et al., Patent No. 6,415,259 (hereafter Wolfinger).
4. Wolfinger was cited in the previous office action.
5. As per claims 1, 12, 23, Wolfinger teaches a method for planning and scheduling tasks within at least one request for change (RFC) within a change window in a computing system (Column 1, lines 41-53; Column 6, lines 29-35), comprising the steps of : deciding whether or not an RFC should be done (Column 3, lines 21-26; Column 12, lines 45-60);

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for each RFC to be done, assigning individual tasks within each RFC to a acceptable servers; (Column 5, lines 1-5; Column 6, lines 52-55; Column 8, lines 30-44);

for each RFC to be done, assigning the start times to said individual tasks (Column 6, lines 29-35).

6. Claims 1, 12, 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Abbott et al., Patent No. 6,314,463 (hereafter Abbott).

7. As per claims 1, 12, 23, Abbott teaches a method for planning and scheduling tasks within at least one request for change (RFC) within a change window in a computing system (Column 5, lines 25-26: a write to the database is considered to be a change), comprising the steps of

deciding whether or not an RFC should be done (Column 8, lines 11-28);

for each RFC to be done, assigning individual tasks within each RFC to a acceptable servers; (Abstract; Column 5, lines 15-20;,, lines 35-37);

for each RFC to be done, assigning the start times to said individual tasks (Column 28, lines 40-45).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott et al., Patent No. 6,314,463 (hereafter Abbott) in view of A Duality Approach to Admission and Scheduling Controls of Queues, Susan H. Xu, 1994 (hereafter Xu).

10. As per claims 3, 14, Abbott does not specifically teach maximizing the value of all RFCs done wherein the value is a profit value derived from performing a plurality of jobs associated with a selected subset of the tasks; and wherein the profit value for each task is expressed as a value of performing the job minus the value of associated costs.

However, Xu teaches the step of maximizing the value of all RFCs done (Abstract, lines 3-5); wherein the value is a profit value derived from performing a plurality of jobs associated with a selected subset of the tasks; and wherein the profit value for each task is expressed as a value of performing the job minus the value of associated costs (Abstract; Pg 274, 2nd Para), for the purpose of scheduling optimization.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Abbott with maximizing the value of all RFCs done wherein the value is a profit value derived from performing a plurality of jobs associated with a selected subset of the tasks; and wherein the profit value for each task is expressed as a value of performing the job minus the value of associated costs, as taught by Xu, because it allows for scheduling optimization.

Claims 4-7, 10-11, 15-18, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott et al., Patent No. 6,314,463 (hereafter Abbott) in view of Games, Critical Paths and Assignment Problems in Permutation Flow Shops and Cyclic Scheduling Flow Line Environments, 1992, (hereafter Kiran).

11. As per claims 4, 15, Abbott does not specifically teach maximizing the number of RFCs done.

However, Kiran teaches the step of maximizing the number of RFCs done for the purpose of optimization. (Pg 255, 1st and 2nd Para: by minimizing downtime, number of tasks to be done is inherently maximized since downtime is utilized to perform more tasks.).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to maximizing the number of RFCs done, as taught by Kiran, because it allows for optimization.

12. As per claims 5, 16, Kiran teaches the step of minimizing total downtime (Pg 255, 1st and 2nd Para).

13. As per claims 6, 17, Kiran teaches the step of minimizing the costs associated with downtime (Pg 255, 1st and 2nd Para).

14. As per claims 7, 18, Kiran teaches the step of minimizing the total execution time in implementing a task (Pg 255).

15. As per claims 10, 11, 21, 22, Abbott in view of Kiran does not specifically teaches the step of minimizing the average response time and the weighted average response time of each RFCs. However, it would have been obvious to one having ordinary skill in the art of scheduling optimization at the time of the applicant's invention to optimize the response time of the RFC in order to optimize the entire scheduling plan so that penalty is reduced.

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Claims 2, 8-9, 13, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott et al., Patent No. 6,314,463 (hereafter Abbott) in view of Crawford et al., Patent No. 6,456,996 (hereafter Crawford).

16. As per claims 2, 13, Abbott does not specifically teach reserving all the servers involved for the duration that begins at the start of the first task and ends at the finish of the last task for each RFC that should be done.

However, Crawford teaches the step of reserving all the servers involved for the duration that begins at the start of the first task and ends at the finish of the last task for each RFC that should be done (Column 5, lines 5-20) for the purpose of meeting constraints.

It would have been obvious to one having ordinary skill in the art to combine the teachings of Abbott with reserving all the servers involved for the duration that begins at the start of the first task and ends at the finish of the last task for each RFC that should be done, as taught by Crawford, because it helps to meet constraints.

17. As per claims 8, 19, Crawford teaches the step of maximizing the number of RFCs meeting their deadlines (Column 4, lines 15-22).

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18. As per claims 9, 20, Crawford teaches the step of minimizing multiple deadline penalties associated with the RFCs and/or their respective tasks (Column 4, lines 15-22).

Response to Arguments

19. Applicant's argument filed on 2/28/2008 regarding to claims 1-23 have been fully considered, but they are not persuasive.
20. In the remark applicant argued in substance that:
- i) Wolfinger's request for changes is not the request for changes as claimed by the applicant.
 - ii) Wolfinger does not teach request for changes within a computing system.
21. The Examiner respectfully disagree with the applicant, as to point:
- i) The applicant never specifically defined what request for changes is. Looking at the specification, it merely gave examples as to what request of changes may be, and is therefore not a valid definition of what it is. Therefore, the Examiner interpreted the changes to be anything that changes the state of an object.
 - ii) The claim merely claims RFC within a change window in a computing system. Since it is unclear what is meant by RFC within a change window, the Examiner broadly interprets this to mean a client submitting some type of request to another computing system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MENGYAO ZHE whose telephone number is (571)272-

6946. The examiner can normally be reached on Monday Through Friday, 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/
Supervisory Patent Examiner, Art Unit 2195